

Claims

1. A composite structure comprising a metal insert
5 (10) having a shaped core (12) of chosen profile,
possessing two opposed marginal regions (18), and also
a plastic reinforcement (28; 56) overmolded on at least
part of the insert (10), characterized in that the core
10 (12) of the insert (10) includes at least one deep-
drawn portion (24; 34; 54) which extends in a generally
transverse direction with respect to at least one of
the marginal regions (18) of the core, and in that the
reinforcement (28; 56) includes at least one
reinforcing element (32; 38; 40; 58) which covers the
15 deep-drawn portion (24; 34; 54) of the insert and which
connects two end regions (30) of the reinforcement (28)
covering the two marginal regions (18) of the core
(12), respectively.
- 20 2. The composite structure as claimed in claim 1,
characterized in that the deep-drawn portion is a
groove (24), and in that the reinforcing element is a
rib (32) which is accommodated in the groove (24).
- 25 3. The composite structure as claimed in claim 1,
characterized in that the deep-drawn portion is a rib
(34) and in that the reinforcing element is a rib (38)
which covers the rib (34).
- 30 4. The composite structure as claimed in claim 1,
characterized in that the deep-drawn portion forms, on
the one hand, a groove (36) which emerges on one face
of the core (12) and, on the other hand, a rib (34)
which emerges on another face of the core, and in that
35 the reinforcing element forms, on one side, a first rib
(40) which covers the groove (36) of the insert and, on
the other side, a second rib (38) which covers the rib
(34) of the insert.

5. The composite structure as claimed in one of claims 1 to 4, characterized in that the core (12) of the insert (10) has an open profile, in particular a U-shaped profile, with an internal face and an external face and in that the deep-drawn portion (24; 34; 54) is formed on the internal face of the core.

6. The composite structure as claimed in one of claims 1 to 4, characterized in that the core (12) of the insert (10) has an open profile, in particular a U-shaped profile, with an internal face and an external face, and in that the deep-drawn portion (24; 34; 54) is formed on the external face of the core.

7. The composite structure as claimed in one of claims 1 to 6, characterized in that at least one of the end regions (30) of the reinforcement is arranged in the form of a lip which covers a marginal region (18) of the core (12).

8. The composite structure as claimed in one of claims 1 to 7, characterized in that at least one of the end regions (30) of the reinforcement (28) is arranged in the form of a notched edge (20, 22).

9. The composite structure as claimed in one of claims 1 to 8, characterized in that at least one of the end regions (30) of the reinforcement is arranged in the form of a raised edge (20).

10. The composite structure as claimed in one of claims 1 to 9, characterized in that the deep-drawn portion (24) of the insert (10) extends from one of the marginal regions (18) of the core (12) to the other.

11. The composite structure as claimed in one of claims 1 to 9, characterized in that the deep-drawn portion (54) extends over part of the core (12) between the marginal regions (18) of the core.

12. The composite structure as claimed in one of
claims 1 to 11, characterized in that it forms an
integral part of at least one element of a motor
5 vehicle front face.